

Repository OAI-DB - Overview

Table of contents

1 What is the aDORe Repository OAI-DB?.....	2
2 How does the aDORe Repository OAI-DB work?.....	2
3 PMP (Protocol for Metadata Posting).....	2
4 Relational Database Tables.....	2
5 Additional Information.....	3

1. What is the aDORe Repository OAI-DB?

The aDORe Repository OAI-DB is a generic relational database framework for the population, storage, and retrieval of OAI Records.

2. How does the aDORe Repository OAI-DB work?

- PMP (Protocol for Metadata Posting) Request sent to Servlet
- MD5 Digest is generated for OAI Identifier
- Record are stored in a character blob
- Records are exposed using OAI-PMH

3. PMP (Protocol for Metadata Posting)

The OAI Protocol for Metadata Posting allows:

1. Putting an Item/Record into an OAI-PMH repository used in the aDORe environment
2. Deleting an Item/Record from an OAI-PMH repository used in the aDORe environment (not yet implemented in aDORe)
3. Updating an Item/Record from an OAI-PMH repository used in the aDORe environment (not yet specified in this Schema, not yet implemented in aDORe)

The simplifying assumptions in the design is that only one metadata format is supported by the OAI-PMH repository to which the Record is Put or from which the Record is deleted. This means that a successful PutRecord always results in the creation of an OAI-PMH Item with a single underlying OAI-PMH Record. It also means that a successful DeleteRecord always results in the deletion of both the Item and the Record. Both assumptions are met in the administrative OAI-PMH repositories used in aDORe.

Based on work by Lyudmila Balakirev, Jeroen Bekaert, Xiaoming Liu, and herbert Van de Sompel. The Schema is available at <http://purl.lanl.gov/aDORe/schemas/2005-08/PMPRequest.xsd>

4. Relational Database Tables

- metadata_format - Table containing Metadata Prefix Schema Information
 - metadata_prefix - OAI-PMH Metadata Prefix (i.e. oai_dc)
 - namespace - XML Namespace for prefix (i.e. http://www.openarchives.org/OAI/2.0/oai_dc/)
 - schema_location - XML Schema Location (i.e. http://www.openarchives.org/OAI/2.0/oai_dc.xsd)
- metadata_record - Table containing OAI Record Information

- digest_id - MD5 Digest of OAI Identifier, used as Primary/Foreign Key
- oai_id - OAI-PMH Identifier
- oai_date - OAI-PMH Datestamp
- size - Size, in bytes of XML data stored as blob
- data - XML Record as Character Blob
- record_sets - Cross-reference table mapping OAI records to OAI Sets
 - digest_id - Foreign Key serving as cross-reference to metadata_record.digest_id
 - set_id - Foreign Key serving as cross-reference to set.set_id
- sets - Table containing OAI Set Information
 - set_id - Internal Primary Key defining set Information
 - set_specs - OAI setSpec
 - set_name - OAI Set Fullname
 - set_desc - OAI Set Description

5. Additional Information

Liu, X., Balakireva, L., Hochstenbach, P., van de Sompel, H. (2005, June).
[File-based storage of Digital Objects and constituent datastreams: XMLTapes and Internet Archive ARC files](#)